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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/591,024

10/04/2006

Joerg Dantlgraber

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EXAMINER

STIMPERT, PHILIP EARL

ART UNIT

PAPER NUMBER

3746

MAIL DATE

DELIVERY MODE

05/28/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/591,024 | DANTLGRABER ET AL. | |
| | Examiner | Art Unit | |
| | Philip Stimpert | 3746 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/20/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Regarding claim 1, line 2 of the claim recites "a drum axis," while line 4 recites "the drum axes." As such, there is insufficient antecedent basis for multiple drum axes in the claim.

4. Further regarding claim 1, lines 2-3 recite "are respectively supported on an inclined surface," while line 7 recites "the inclined surfaces." There is insufficient antecedent basis for multiple inclined surfaces in the claim. The examiner is interpreting lines 2-3 as "are supported on respective inclined surfaces," for the purpose of examination.

5. Regarding claim 5, there is insufficient antecedent basis for "the transient portion" recited in line 3.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 2, and 4-7 are rejected under 35 U.S.C. 102(b) as being anticipated by US patent 4,872,394 to Nakagawa et al. (Nakagawa).

8. Regarding claim 1, Nakagawa teaches an axial piston machine (Fig. 6) comprising two cylinder drums (9A, 9B) which are guided in a housing (2, 3, 80), can be respectively rotated about a drum axis (M) and are supported on inclined respective surfaces (9bB, 9bA). Nakagawa also teaches pistons (14A, 14B) which can be rotated around a shaft axis inclined with respect to the drum axis are allocated to each cylinder drum (9A, 9B), wherein pressure chambers (24A, 24B) defined by cylinders (13A, 13B) of the drums and the pistons are adapted to be connected to a pressure port (5) and a tank port (4) respectively of the housing via pressure and tank channels (28A, 28B, 29A, 29B) of the cylinder drums (9A, 9B). Nakagawa also teaches that the inclined surfaces are between the cylinder drums, and that the channels end in the inclined surfaces.

9. Regarding claim 2, Nakagawa teaches that the inclined surfaces are formed on end faces of a control disk (80) through which a drive shaft (6) passes.

10. Regarding claim 4, Nakagawa teaches that the control disk has a flattened portion (cylindrical exterior of 80) that is capable of acting as a protection against externally applied torsional twist.

11. Regarding claim 5, Nakagawa teaches that an axial distance of a central axis of the pressure port (5) and the cross-sectional area of the pressure channel are selected in a transient portion between the housing and the control disk such that the radial force acting on the control disk and the resultant torque can be compensated for by pressure forces. In particular, the control disk (80) is considered transient between the housing

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elements (2, 3, 80). Further, as shown in Fig. 3, forces in the pressure port (5) and channel (29) will tend to compensate for radial forces acting on the control disk.

12. Regarding claim 6, the pressure and tank channels (28, 29) constitute control members located on a joint reference circle in which the pressure and tank ports end (in their communication with the channels).

13. Regarding claim 7, Nakagawa teaches that the piston machine may be used as a hydraulic pump or motor (col. 1, ln. 12-16).

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claim 3 is rejected under 35 U.S.C. 103(a) as being obvious over Nakagawa.

16. Regarding claim 3, Nakagawa teaches the invention of claim 2 as discussed above. Nakagawa does not explicitly teach an insulating layer between the control disk and the housing. However, as shown in Fig. 6, Nakagawa does disclose grooves at the junction of the control disk (80) and the housing end caps (2, 3). One of ordinary skill in the art would expect these grooves to be used to house a seal, such as an O-ring, as is well known in the art. Such a seal would inherently exhibit at least a minimal amount of insulating tendency, sufficient to satisfy the terms of claim 3.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip Stimpert whose telephone number is (571)270-1890. The examiner can normally be reached on Mon-Fri 7:30AM-4:00PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Kramer can be reached on (571) 272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Devon C Kramer/
Supervisory Patent Examiner, Art
Unit 3746

/P. S./
Examiner, Art Unit 3746
22 May 2009